

Marine isopod crustaceans of Seto Inland Sea deposited at the Toyama Science Museum 1. Suborder Anthuridea - 1

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# Marine Isopod crustaceans of Seto Inland Sea deposited at the Toyama Science Museum 1. Suborder Anthuridea -1\*

Noboru Nunomura Toyama Science Museum

富山市科学文化センター所蔵の瀬戸内海産等脚目甲殻類 I. ウミナナフシ類その1

布村 昇 富山市科学文化センター

富山市科学文化センターに所蔵されている瀬戸内海産等脚目甲殻類の標本ならびに筆者の調査した等脚類がかなりの個体数になったのでこれを順次、報告する。第1報ではウミナナフシ亜目の一部について扱い、5新種を含む12種を報告した。なお、本博物館のコレクションの多くは永田樹三氏の採集になる藻場を中心としたコレクション、布施慎一郎氏らのグループの香川県沖の採集品、筆者自身の採集によるもの等が中心であるが、その他の科学者の採集品なども含んでいる。なお、筆者による他の博物館の収蔵品も併せて報告する。

なお, 本研究は水産無脊椎動物研究所の助成金を使用した。

Suborder Anthuridea ウミナナフシ亜目

Family Anthuridae スナウミナナフシ科

Apanthura fusei n. sp. フセウミナナフシ (新称)

Abanthura trioculata n. sp. ミツメウミナナフシ (新称)

Apanthura shikokuensis n. sp. シコクウミナナフシ (新称)

Haliophasma (?)sp. スナウミナナフシ科の1種

Cyathura kikuchii Nunomura, 1976 キクチスナウミナナフシ

Family Paranthuridae ウミナナフシ科

Paranthura japonica Richardson, 1906 ヤマトウミナナフシ

Paranthura kobensis Nunomura, 1975 コウベウミナナフシ

Paranthura kagawaensis n. sp. カガワウミナナフシ (新称)

Paranthura laticauda Nunomura, 1975 オビロウミナナフシ

Colantura nigida, Nunomura, 1975 クロアシタラズウミナナフシ

Colantura setouchiensis n. sp. セトウチアシタラズウミナナフシ (新称)

<sup>\*</sup>Contribution from the Toyama Science Museum No.134

#### FamilyHyssuridae

Eisothistos nipponica Nunomura, 1984 カワリウミナナフシ

Seto Inland Sea is situated in Western Japan. Hitherto, some unique species isopods have been reported in this area such as *Nishimuraia paradoxa*, and *Eisothistos nipponica*.

The sources of main material here dealt in this series is summerized as follows:

In 1975~1976, a faunal research survey was carried out by Dr. Shin'ichiro Fuse and other scientists.

In  $1976 \sim 1977$ , Dr. Kizo Nagata, specialist of gammaridean amphipod, had collected many isopod specimens together with amphipods. The specimens collected with amphipods, were handed to me for identification and for my study.

During 1973~1976 and again since 1991, I myself carried out some shore surveys at various parts of Seto Inland Sea.

# Family Anthuridae Apanthura fusei n. sp.

(Jap. name: Fuse-uminanafushi, new)

Fig.1

Material examined: 1♀ (holotype, 6.6 mm in body length), subtidal zone, Enohama, Ajicho, Kagawa Pref., coll. Shin'ichiro, Fuse, Sep. 1975. Holotype (TOYA Cr-11529) is deposited at the Toyama Science Museum.

Description: Body very elongated, about 17 times as long as broad. Relative length of pereonal somities is approximately 2: 3: 3: 5: 5: 4: 2. Color creamy white all over in alcohol. Eye lacking. Anterolateral angles of cephalon exceed as far as the rostral projection. Dorsal pit lacking. Demarcation of pleonal somities visible dorsolaterally but indistinct in medial part.

Antennule(Fig. 1 B) with 5 distinct segments; first segment stout; second to terminal segments with 3 aesthetascs at the tip.

Antenna (Fig.1 C) a little longer than antennule, composed of 7 segments; first segment small; second segment largest; terminal segment small, with a tuft of setae.

Mandible (Fig.1 D) with 3-headed apex and three-segmented palp; first and second segments longest.

Maxillula (Fig.1 E) slender with 6 teeth on inner margin of apical part.

Maxilliped (Fig.1 F) with 4 free segments; terminal segment small and semicircular with  $7\sim8$  setae at the tip.

Pereopod 1 (Fig.1 G) stout; basis stout; ischium triangular; merus trapeozoid; carpus small and triangular; propodus stout.

Pereopods 2 and 3 (Fig.1 H & I) slightly slenderer than the pereopod 1.

Pereopods 4 to 7 (Figs.1 J & K) ambulatory; basis and ischium oblong; merus rectangular

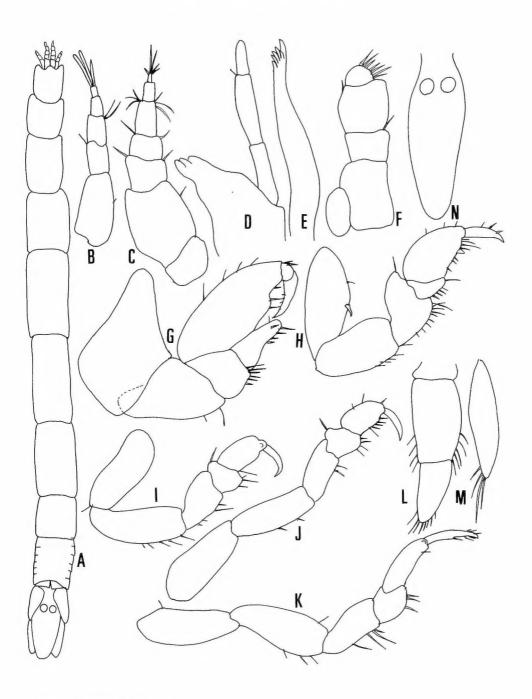


Fig.1 Apanthura fusei n. sp.

A. Dorsal view; B. Antennule; C. Antenna; D. Mandible; E. Maxillula; F. Maxilliped; G. Pereopod 1: H. Pereopod 2. Pereopod 3 J. Pereopod 4, K. Pereopod 7; L. Endopod of uropod. M. Exopod of uropod; N. Telson. (All: holotype female).

but somewhat shorter than ischium; carpus triangular; propodus rather robust.

Pleopods are characteristic in female.

Endopod of uropod(Fig.1 L) oblong; basal segment rectangular with 4 setae on both lateral margins; terminal segment tapers towards the tip and with 12 setae. Exopod of uropod (Fig.1 M) rather slender.

Telson (Fig.1 N) ovate lanceolate with a pair of statocysts near the basal part.

Remarks: The present new species seems to be most closely allied to Apanthura coppengeli Barnard from Dundas Straight, but the former is separated from the latter in the following features: (1) shape of both antenae (2) shape of mandibular palp, and (3) shorter carpus of fourth to seventh pereopods. It is also allied to A. callitris Poore et Ton, reported from Australia, but differs from the latter in the following features: (1) less numerous segmentation of antennule, (2) shape of both rami of uropods, (3) less setose body, (4) distinct lateral suture lines of pleonal somites, and (5) shape of maxilliped.

*Etymology*: The species is named in hornor of Shin'ichiro Fuse, the former Seto Marine Biological Laboratory, who promoted not only a series of work but also many biological investigations or surveys in Seto Inland Sea.

# Apanthura trioculata n. sp.

(Jap. name: Mitsume-uminanafushi, new)

Fig.2

*Material examined*:  $1\mapstep (holotype, 7.2 mm in body length), subtidal zone, west of Noumisaki, Kagawa Pref., coll. Shin'ichiro Fuse, Feb. 1975; <math>4\mapstep (paratypes, 6.6\mapstep 7.0 mm in length)$  Kagawa Pref., coll. Shin'ichiro Fuse, Mar. 1975;  $1\mapstep (paratypes, 6.0\mapstep 6.0\mapstep 1976)$ , Oogoshi, Kagawa Pref. coll. Shin'ichiro Fuse, Feb. 1976;  $4\mapstep (paratypes, 6.1\mapstep 6.4\mapstep 6.4\mapstep 1975)$ ,  $3\mapstep (paratypes, 7.1\mapstep 7.1\mapstep 1975)$ ,  $3\mapstep (paratypes, 7.1\mapstep 7.1\mapstep 1975)$ ,  $1\mapstep (paratype, 6.8\mapstep 1975)$ ,  $1\mapstep (paratype, 6.8\mapstep 1975)$ ,  $1\mapstep (paratype, 6.8\mapstep 1976)$ , subtidal zone, Kagawa Pref., coll. Sin'ichiro Fuse, Mar. 1976;  $1\mapstep (paratypes, 6.5\mapstep 1976)$ , subtidal zone, Kizawa, Sakaide-City, coll. Shin'ichiro Fuse, Kagawa Pref., Feb. 1976. Type series is deposited as follows: Holotype (TOYA Cr-11530) and 10 paratypes (TOYA Cr-11531\mapstep 11540) at the Toyama Science Museum and 4 paratypes (OMNH Ar-3505\mapstep 3508) at the Osaka Museum of Natural History.

Description: Body almost white in alcohol, elongated and about 15 times as long as wide; excluding both antennae. Anterolateral angles of cephalon (Fig.2 B) small, projected as far as rostrum. Without dorsal pit. Eyes small, each eye composed of 3 ommatidia, which are scattered sparecely. Demarcations of pleonal somites visible dorsolaterally but indistinct in medial part. Gravid female with 16 eggs.

Antennule (Fig.2 C) with 5 distict segments; first segment large; second to fourth segments

rectangular; terminal segment small and rectangular with a tuft of setae at the tip.

Antenna (Fig.2 D) with 6 distinct segments; first segment small; second segment largest

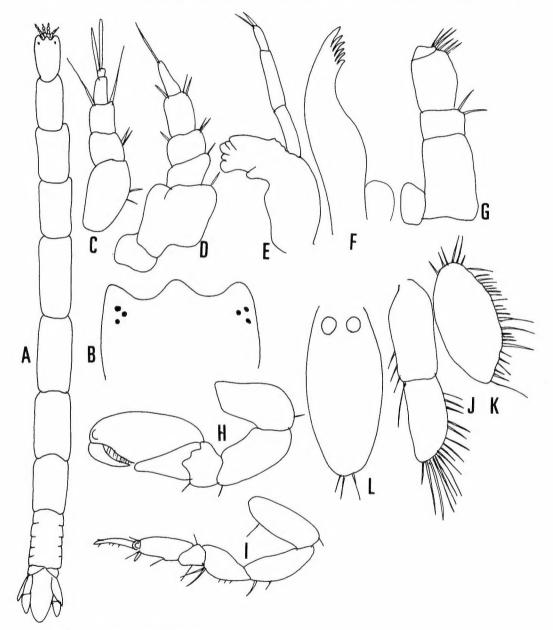


Fig.2 Apanthura trioculata n. sp

- A. Dorsal view; B. anterio part of cephalon; C.Antennule; D. Antenna; E. Mandible;
- F. Maxillula; G. Maxilliped; H. Pereopod 1: I. Pereopod 4; J. Endopod of uropod.
- K. Exopod of uropod; L. Telson. (All: holotype female).

and grooved; terminal segment with a tuft of setae at the tip.

Mandible (Fig.2 E) with three to five-headed apex and three-segmented palp; first and second segments oblong without seta; terminal segment small with 2 setae at the tip.

Maxillula (Fig.2 F) with 6 teeth at the tip.

Maxilliped (Fig.2 G) composed of 4 segments; first segment rectangular; second segment short with 2 setae at inner distal corner; third segment rectangular with 3 setae; terminal segment small and semicircular with 3 setae on distal corner.

Pereopod 1 (Fig.2 H) subchelete; basis and ischium rectangular; merus rather short; carpus triangular; propodus big with 6 to 7 spines on inner margin.

Pereopods  $2\sim3$  are a little slenderer than pereopod; basis and ischium rectangular; merus triangular; carpus small; propodus rather stout with 7 to 8 spines on inner margin.

Pereopods  $4\sim7$  (Fig.2 I) are ambulatory; basis and ischium oblong; merus rectangular; carpus almost square; propodus rectangular.

All the pleopods not characteristic in female.

Endopod of uropod (Fig.2 J) oblong; terminal segment round with 20 plumose setae around the margin. Exopod of uropod (Fig.2 K) elliptical with many setae round the margin.

Telson (Fig.2 L) ovate-lanceolate, with a pair of rather big statocysts near the basal part.

Remarks: The present new species is most closely allied to Apanthura pallida Wägele from the Gulf of Elat, Israel-Sinai Border.

But the former is separated from the latter in the following features: (1) presence of demarcations of pleonal somites, (2) less numerous setae on pereopods, and (3) disctinct teeth apex on mandible.

Etymology: The species is named after the characteristic shape of body: each eye consisting of 3 ommatidia.

## Apanthura shikokuensis, n. sp,.

(Jap. name: Shikoku-uminanafushi, new)

# Fig.3

*Material examined*: 1♂ (holotype, 12.3mm in body length), subtidal zone, Kizawa, Mar. 1975. Holotype (TOYA Cr-11541) is deposited at the Toyama Science Museum.

Description: Body elongated, about 11 times as long as wide excluding both antennae. Color dull yellow in alcohol. Anterolateral angles of cephalon small and projected as far as rostrum. Eyes big, each eye composed of 60 ommatidia. Pereonal somites 1~5 subequal in length. Without dorsal pit. Pleonal suture line distinct.

Antennule (Fig.3 B), reaching the anterior margin of first pereonal somite, composed of 14 segments fourth to terminal segments with many aesthetascs.

Antenna (Fig.3 C) a little longer than the antennule, and composed of 11 segments.

Pereopod 1 (Fig.3 G) subchelate; basis large and almost square; ischium rectangular; merus short; carpus triangular; propodus with a row of 30 setae on inner margin.

Pereopods  $2\sim3$  (Fig.3 H) rather slender; basis and ischium oblong; merus rectangular; carpus almost square; propodus slender with  $11\sim12$  setae on inner margin.

Pereopods 4~7 ambulatory; basis and ischium oblong; merus and carpus rectangular;

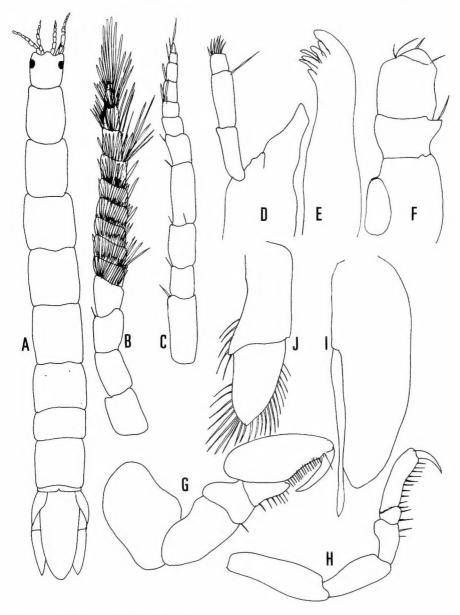


Fig.3 Apanthura shikokuensis n. sp.

A. Dorsal view; B. Antennule; C. Antenna; D. Mandible; E. Maxillula; F. Maxilliped;

G. Pereopod 1: H. Pereopod 2; I. Male second pleopod; J. Uropod (All: holotype male).

propodus slender with 14~15 setae on inner margin.

Male second pleopod (Fig.3 I) with a long stylus whose tip is club-shaped.

Endopod of uropod lanceolate. Exopod of uropod (Fig.3 J) elliptical. Telson dorsally ridged, without statocysts.

Remarks: The present new species is most closely allied to Apanthura honshuensis Wägele, reported from Sagami Bay. But the former is separated from the latter in the following features: (1) smaller eyes, (2) less numerous segment on pereopods, (3) indistinct suture lines of pleonal somites, (4) more numerous segments of antenna, and (5) stouter maxillula.

Etymology: The species name is derived from the type locality, Shikoku.

## Haliophasma (?) sp.

#### Fig.4

*Material examined*: 3 + 4 (4.8 $\sim$ 6.2 mm in body length), Ohba, Misaki-cho, Ehime Pref. Nagata, Nov. 11, 1976. The specimens are deposited at the Toyama Science Museum (TOYA Cr-11543).

Description; Body rather short; 9.5 times as long as wide except both antennae. Color yellow in alochol. Rostral projection equally in extent as anterolateral angles of cephalon. Eyes rather small, each composed of 5~6 ommatidia. Pereonal somites similar in length. Dorsal pit lacking. Seventh pereonal somite reduced. Pleotelson with a pair of large statocysts.

Antennule (Fig.4 C) composed of 14 segments; first to fourth segments stout; fifth to terminal segments square; terminal segment small and with brush-like setae.

Antenna (Fig.4 D), a little longer than antenna, composed of 11 segments.

Mandible (Fig.4 E); pars incisiva acute; palp 3-segmented; second segment with a long seta, terminal segment with 7 setae.

Maxillula (Fig.4 F) with a stouter and 4 thin teeth at the tip.

Maxilliped (Fig.4 G) four-segmented, termnimal segment big with 7~8 setae at the tip. Pereopod 1 (Fig.4 H); basis rounded; ischium rectangular merus one-third length of ischium, carpus triangular; propodus big with many setae on inner margin.

Pereopod 2~3 (Fig.4 I); basis and ischium oblong and simialr in shape; merus half the length of basis; propodus rounded with 7 spines on inner margin.

Pereopods 4~6 (Fig.4 J); basis elliptical; ischium, a little shorter than basis; merus half the length of ischium; carpus triangular; propodus rectangular with 5 relatively long setae.

Pereopod 7 (Fig.4 K); basis stout; ischium rectangular; merus a little shorter than ischium; carpus triangular; propodus rectangular with 2 long setae.

Second pleopod 2 (Fig.4 L) not characteristic in female.

Endopod of uropod (Fig.4 M); basal segment rectangular. Exopod semicircular with sinuate margin and many setae. Telson rather wide.

*Remarks*: The present specimens seem to belong the *Haliophasma* but not certain. If they belong to the genus *Haliophasma*, it is allied to H. *swainsonia* reported from McGawrans Beach, Australia, but the former is separated from the latter in the following features: (1) less elongated body shape, (2) scattered eyes, (3) shape of madibular palp, (4) longer cephalon, (5)

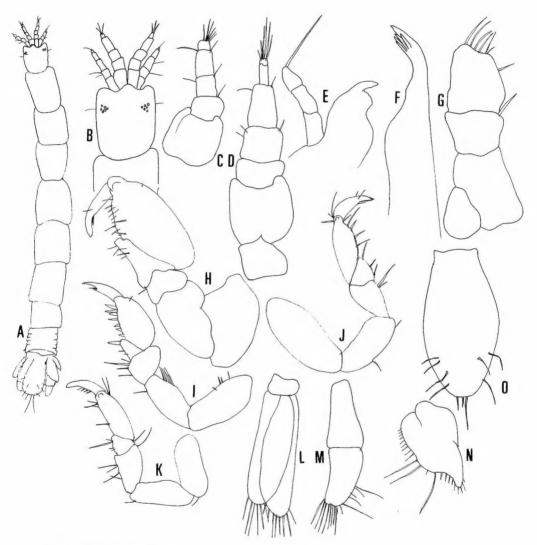


Fig.4 Haliophasma (?) sp.

A. Dorsal view; B. Cephalon; C. Antennule; D. Antenna; E. Mandible; F. Maxillula; G. Maxilliped; H. Pereopod 1: I. Pereopod 2; J. Pereopod 4; K. Pereopod 7; L. seccond pleopd; M Endopod of uropod. N. Exopod of uropod; O.Telson. (All: female).

longer pleotelson, and (6) bigger terminal segment of maxilliped.

# Cyathura kikuchii Nunomura, 1974

(Jap. name: Kikuchi-suna-uminanafushi)

Cyathura kikuchii, Nunomura, 1974, p73 figs.2-3.

*Material examined*:  $18 \stackrel{\circ}{\downarrow} \stackrel{\circ}{\uparrow}$ , subtidal zone, west of Noumisaki, Kagawa Pref., coll. Shin' ichiro Fuse, Mar. 1975;  $31 \stackrel{\circ}{\uparrow} \stackrel{\circ}{\uparrow}$ , subtidal zone, west of Noumisaki, Sakaide City, Kagawa Pref., coll. Shin'ichiro Fuse, Sep. 1975;  $10 \stackrel{\circ}{\uparrow} \stackrel{\circ}{\uparrow}$ , subtidal zone, Kabegawa-river, Shido-cho, Kagawa Pref., coll. Shin'ichiro Fuse, Sep. 1975;  $9 \stackrel{\circ}{\uparrow} \stackrel{\circ}{\uparrow}$ , subtidal zone, Goten, Aji cho, coll. Shin'ichiro Fuse, Feb.1975;  $9 \stackrel{\circ}{\uparrow} \stackrel{\circ}{\uparrow}$ , subtidal zone, Nishiwaki, Sakaide City, coll. Shin'ichiro Fuse, Feb. 1976.

#### Paranthura kagawaensis n. sp.

(Jap. name: Kagawa-uminanafushi, new)

Fig.5

Material examined: 13 (Holotype, 6.2 mm in body length), subtidal zone, west of Noumisaki, Kagawa Pref., coll. Shin-ichiro, Fuse, Feb. 1975. Hotolype is deposited at the Toyama Science Museum. (TOYA Cr-11542).

Description: Body elongated, about 12 times as long as broad both antennae. Color yellow in alcohol. Anterolateral angles of cephalon exceeds as long as the rostral projection. Eyes rather large, each composed of  $16\sim20$  ommatidia. Pereonal somites similar in length but the seventh peonite about half the length of sixth. Dorsal pit lacking. Seventh pereonal somite reduced. Pleotelson without statocyst. Demarcation of pleonal somites visible dorsolaterally but indistinct in medial part.

Antennule (Fig.5 C) with 8 distinct segments; first segment stout; terminal segment with  $3\sim4$  aesthetascs at the tip.

Antenna (Fig.5 D), composed of 6 segments; first segment small; second segment big and grooved; terminal segment with a tuft of setae.

Mandible (Fig.5 E) with an acute apex and three-segmented palp; second segment long with a long seta; terminal segment half the length of the second segment with 8 setae.

Maxillula (Fig.5 F) with 7 teeth at the tip of outer lobe.

Maxilliped (Fig.5 G) with 3 segments; terminal segment relatively large.

Pereopod 1 subchelate; (Fig.5 H); basis large and almost square; ischium rectangular; merus short; carpus triangular; propodus with a row of about 30 setae on inner margin.

Pereopods 2 and 3 (Fig.5 I) rather slender; basis and ischium oblong; merus rectangular; carpus almost square; propodus slender with  $11\sim12$  setae on inner margin.

Pereopods 4~7 (Fig.5 J) ambulatory; basis and setae on inner margin; ischium oblong; merus and carpus rectangular; propodus slender with 14~15 setae.

Male second pleopod (Fig.5 K) with a long styls, whose tip is club-shaped.

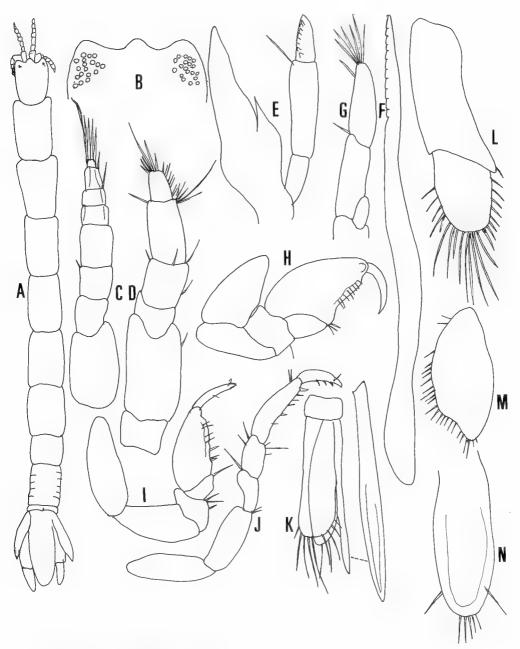


Fig.5 Paranthura kagawaensis n. sp.

A. Dorsal view; B. Anterior part of cephalon; C. Antennule; D. Antenna; E. Mandible; F. Maxillula; G. Maxilliped; H. Pereopod 1: I. Pereopod 2; J. Pereopod 7 K. Male second pleopd, L. Endopod of uropod. M. Exopod of uropod; N. Telson. (All: holotype male).

Endopod of uropod ovate (Fig.5 L) lanceolate. Exopod of uropod (Fig.5M) elliptical. Telson (Fig.5 N) dorsally ridged, without statocysts.

Remarks: The present new species is characterized in having eyes consisting more numerously scatted ommatidia. This species is allied to Paranthura algicola Nunomura from California, West Coast of North America, but the former is separated from the latter in the following features: (1) less protruded anterolateral margins of cephalon, (2) shape of both antennae and (3) more numerous ommatidia of eyes.

Etymology: The scientific name is derived from Kagawa the name of locality.

# Paranthura kobensis Nunomura, 1975

(Jap. name: Koube-uminanafushi)

Paranthura kobensis Nunomura, 1975. p.25, figs.8-9.

*Material examined*:  $1 \stackrel{\circ}{+}$ , Takino-chaya, Tarumi, Kobe City, coll. Yasuhiko Shibata, Mar. 18,1960. This specimen deposited at the Osaka Museum of Natural History;  $1 \stackrel{\circ}{+}$ , subtidal zone, mouth of Ayagawa-river, Kagawa Pref., date unkouwn.

# Paranthura laticauda Nunomura, 1975.

(Jap. name: Obiro-uminanafushi)

Paranthura laticauda Nunomura, 1975. p.23, figs.6-7.

Material examined: 1♂, intertidal zone, Jôgasaki, Wakayama City, Mar.8, 1974, coll. Noboru Nunomura, deposited at the Osaka Museum of Natural History; 1♀, subtidal zone, Oogoshi, Sakaide City, Kagawa Pref. coll. Shin'ichiro Fuse, Feb. 1976.

#### Paranthura japonica Richardson, 1906

(Jap. name: Yamato-uminanafushi)

Paranthura japonica Richardson, 1909. p.77, figs. 4-5.

Richardson, Nunomura, 1975, p.28.

Material examined: 1ex, Tagurazaki, Apr. 15, 1984, coll. Michio Ohtani, This species deposited at the Osaka Museum of Natural History; 2♀♀, subtidal zone, mouth of Aayagawa, Sakaide City, Kagawa Pref., coll. Shin'ichiro Fuse, Mar.1976; 2♀♀, subtidal zone, Oogoshi, Sakaide City, Kagawa Pref., coll. Shin'ichiro Fuse, Sep.1975.

# Paranthura nigrocaudatus (Nunomura, 1976)

(Jap. name: Kuroo-uminanafushi)

Leptanthura nigrocaudatus Nunomura, 1975. p.17, figs.1-2.

Material examined: 1ex, Tagurazaki, Wakayama City, coll. Michio Ohtani, Apr.15,

deposited at the Osaka Museum of Natural History.

# Colantura nigra Nunomura, 1975

(Jap. name: Kuroashitarazu-uminanafushi,)

Colantura nigra Nunomura, N.1975. p.21, figs.4~5.

Material examined: 5♀, Nakamura, Hokutan-cho, Awaji Island, Hyogo Pref. coll. Noboru Nunomura, July 8,1973.

### Colantura setouchiensis n. sp.

(Jap. name:Setouchi-ashitarazu-uminanafushi, new)

Figs. 6~7

*Material examined*: 1♂ (holotype, 4.9 mm in body length) and  $17 \stackrel{?}{\hookrightarrow} (1 \stackrel{?}{\hookrightarrow} \text{ allotype, 5.5 mm}$  in body length and  $16 \stackrel{?}{\hookrightarrow} \stackrel{?}{\hookrightarrow}$ , paratypes, 3.1~5.2 mm in body length), *Sargassum* bed, Ryozaki and Sumiyoshizaki, Kunimi-cho, Ooita Pref.coll. Kizo Nagata. Type is deposited as follows: Holotype (TOYA Cr-11544), allotype (TOYA Cr-11545) and 10 paratypes (TOYA Cr-11546 ~11555) at the Toyama Science Musuem and 5 paratypes (OMNH Ar-3509~3513) at the Osaka Museum of Natural History.

Description: Body rather short; 10 times as long as wide except both antennae. Color yellow in alcohol. Rostral projection equally in extent as anterolateral angles of cephalon.

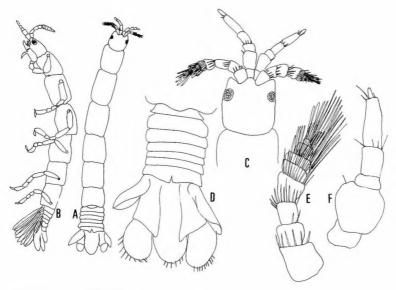


Fig.6 Colantura setouchiensis n. sp.

A. Dorsal view; B. Lateral view; C. Cephalon; D. Posterior part of the body E. Antennule; F. Antenna. (All: holotype male).

Eyes rather large, each composed of 13~16 ommatidia. Pereonal somites similar in length. Dorsal pit lacking. Seventh pereonal somite much reduced. Pleotelson wide and without statocyst.

Antennule (Fig.6 E), reaching the posterior end of cephalon and composed of 8 segments with many aesthetascs in male.

Antenna (Fig.6 F) as long as antennule, composed of 6 segments.

Mandible much reduced; palp, lacinia, molar also reduced.

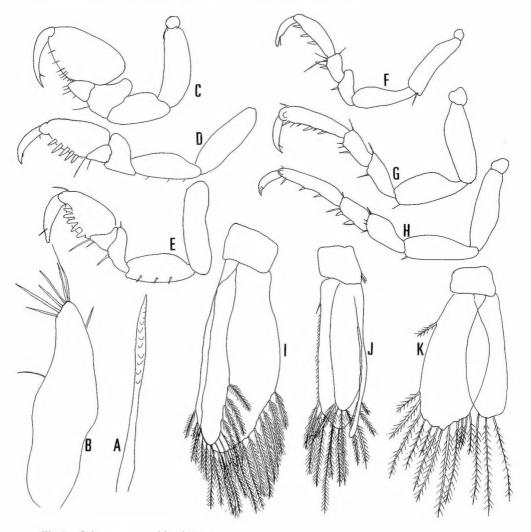


Fig.7 Colantura setouchiensis n.sp.
A. Maxillula; B. Maxilliped; C-H. Pereopods 1~6: I. Pleopod 1; J. Pleopd 2; K. Pleopod 3. (All: holotype male).

Maxillula (Fig.7 A) thin with 10~11 teeth on distal half.

Maxilliped (Fig.7 B) slender, composed of only a single segment.

Pereopod 1 (Fig.7 C); basis oblong; ischium rather stout; merus trapeozoidal; carpus small and triangular; propodus big.

Pereopod 2 (Fig.7 D); basis and ischium rectangular; merus triangular; carpus triangular; propodus stout with 5 setae on inner margin.

Pereopod 3 (Fig.7 E); basis oblong; ischium as long as basis with 3 setae on inner margin; mersus trapeozoid; carpus small and triangular; propodus stout with  $10\sim12$  setae on inner margin; propodus stout with 5 setae on inner margin.

Pereopod 4 (Fig.7 F); basis and ischium oblong; merus and carpus as long as wide; propodus rectangular with 3 setae.

Pereopod 5 (Fig.7 G); basis and ischium oblong; merus rectangular; carpus as long as merus; propouds long with  $6\sim7$  sete on inner margin.

Pereopod 6 (Fig.7 H); basis oblong; ischium as long as basis; merus about half the length of ischium; carpus rectangular and a little shorter than merus; propodus 1.3 times as long as carpus with 3 setae on inner margin; propouds long with 3 setae.

Pereopod 7 lacking.

Pleopod 1 (Fig.7 I); endopod narrow; exopod wide and rounded.

Pleopod 2 (Fig.7 J); endopod short with long stylus; exopod larger than endopod and lanceolate with setae.

Pleopods  $3\sim5$  (Fig.7 K) both rami elliptical in shape with  $3\sim12$  plumose setae around the margin.

Uropod (Fig.6 D); exopod elliptical semicircular with sinuate margin and many setae; endopod basal segment rectangulr; terminal segment.

Remarks: The present species is most closely allied to Colantura nigra Nunomura, which had been recorded from the Awaji Island. The former is separated from the latter in the following features: (1) paler body color, (2) bigger size, and (3) scattered ommatidia of eyes.

Etymology: The science name is derived from Setouchi, the type-locality.

# Family Hyssuridae Eisothistos nipponica Nunomura, 1984

(Jap. name: Kawari-uminanafushi)

Eisothistos nipponica Nunomura, 1984. p.51, figs.1-3.

Material examined: 1♀, Shimosho-Harbour, Han'nan-cho, Osaka Pref., coll. Kazuki Ami and Sadami Kitao, Oct.13,1982. The specimen is deposited at the Toyama Science Museum.

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